



Partner Reported Opportunities (PROs)  
For Reducing Methane Emissions

Compressors/Engines ☐  
Dehydrators ☐  
Pipelines ☒  
Pneumatics/Controls ☐  
Tanks ☐  
Valves ☐  
Wells ☐  
Other ☐

# Use of Improved Protective Coating At Pipeline Canal Crossings

## Applicable sector(s):

☒ Production ☒ Processing ☒ Transmission and Distribution

Partners reporting this PRO: Texaco

Other related PROs: Inspect Flowlines Annually, Clock Spring® Repair, Use Ultrasound to Identify Leaks

## Technology/Practice Overview

### Description

Cross-country pipelines are normally wrapped in a protective coating and buried in the ground. Where these pipelines cross over waterways, they are normally suspended on a pipeline bridge, and externally coated with a corrosion protective paint. Deterioration of the protective paint coating from solar and particularly marine environments can result in external corrosion and leaks that are difficult to find and repair.

A partner reports using PRITEC®, which is an improved protective coating made of a mixture of butyl adhesive and polyethylene that is applied hot. This coating withstands exposure to weather and ultraviolet radiation for prolonged periods without degradation.

### Principal Benefits

Reducing methane emissions was:

☐ A primary justification for the project ☒ An associated benefit of the project

### Operating Requirements

Suitable for gas temperatures between -40 and +180°F.

### Applicability

This PRO applies to all new, bare metal pipe materials, and existing pipe that is sandblasted clean.

## Methane Savings

44 Mcf/yr

## Costs

Capital Costs (including installation)

☐ <\$1,000 ☐ \$1,000-\$10,000 ☒ >\$10,000

Operating and Maintenance Costs  
(Annual)

☒ <\$100 ☐ \$100-\$1,000 ☐ >\$1,000

## Payback (Years)

☐ 0-1 ☐ 1-3 ☐ 3-10 ☒ >10

## Methane Emission Reductions

The methane emission reductions may be estimated using the EPA/GRI study "Methane Emissions from the Natural Gas Industry," Volume 3, Appendix A, Section P-3: 43,705 scf/leak-yr in unprotected-steel gas gathering pipe. One partner has reported natural gas emission reductions of 25 Mcf/leak/yr for 26 crossings.

## Economic Analysis

### Basis for Costs and Savings

The savings of 44 Mcf/yr are based on preventing one leak per year in every 30-canal crossings, 1/3<sup>rd</sup> mile each, of unprotected steel.

### Discussion

The primary benefits of this technology are to increase pipeline safety and reduce emergency repair costs. The associate benefit is to save natural gas. The capital cost assumes applying the coating materials on new pipe. The coating material cost is about \$0.70/ft<sup>3</sup>.